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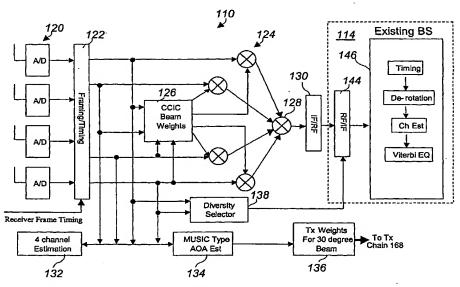
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(54) Title: HYBRID SPACE-TIME DIVERSITY BEAM FORMING SYSTEM



(57) Abstract: A method of beam forming is provided for an appliqué intelligent antenna system. The appliqué system uses a watchdog function to monitor broadcast channels of an existing mobile wireless base station to which it is attached. The appliqué system synchronizes itself in frequency and time to the base station. In GSM timing delays are used to prevent collision of timeslots from various mobile terminals. The appliqué system uses this time delay mechanism to compensate for its own processing delays so that its presence is transparent to the existing base station. Angle of arrival calculations are made to determining beamforming parameters. The antenna of the four element antenna system are separated by is (5^{1/2}-1)/2 times the wavelength. Angle of arrival for the strongest uplink multipath signal are used to direct the downlink beam.

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